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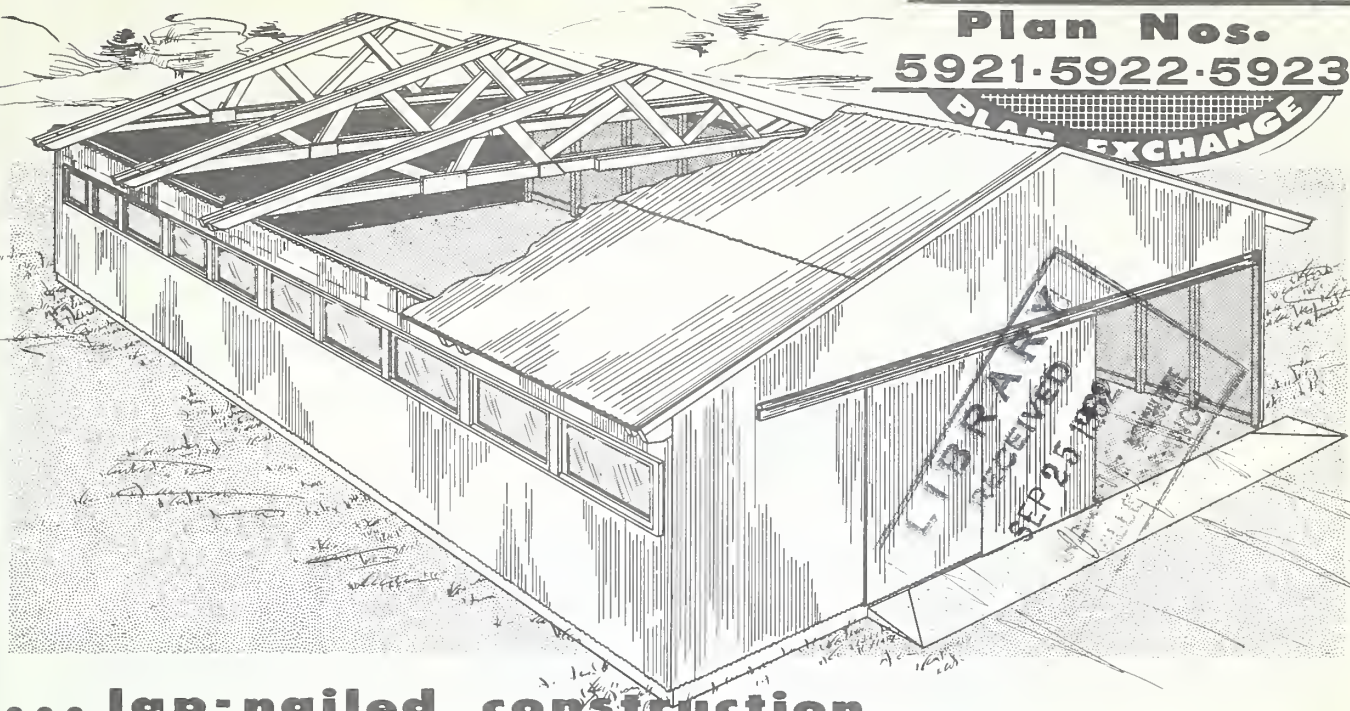
Do not assume content reflects current
scientific knowledge, policies, or practices.

THREE
Utility Trusses

... lap-nailed construction

For clear spans, roof trusses require less material than conventional rafters. These trusses can be built quickly without elaborate jigs or any special tools, and they require a minimum of precision cuts before assembly. The pieces are arranged so the ends can be trimmed off after each truss is assembled. To assemble a truss, drive three stakes in line on level ground. The two outer stakes mark location of the wall plate and the lap of the bottom chord of the truss. Drive a fourth stake to mark the point just beneath the top chords. Using these stakes, lay out the pieces and nail them according to the specifications on the working drawings. Trim the ends of the pieces, and the truss is complete.

Be sure to order the working drawing if you wish to use one of these trusses. The drawings give a bill of material for each truss and clearly show how the trusses fit together and are fastened. Nailing is critical, so follow the plans for exact size and placement of the nails.

Plan 5921 (1 sheet) spans 36 feet and has double chords on the top and bottom.

Plan 5922 (1 sheet) spans 24 feet and has double chords on the top but not on the bottom.

Plan 5923 (1 sheet) spans 24 feet and has no double members.

HOW TO ORDER PLANS

Complete working drawings may be obtained through your county agent or from the Extension agricultural engineer at most State agricultural colleges. There is usually a small charge.

ORDER PLANS BY NUMBER AND TITLE

If working drawings of this plan are not available in your State, write to the U.S. Department of Agriculture, Agricultural Engineering Research Division, Plant Industry Station, Beltsville, Md. The U.S. Department of Agriculture does not distribute drawings, but will direct you to a State that does distribute them.

Refer to the tables on the back of this sheet to judge how far apart to set your trusses. The tables also recommend purlin size and spacing for different truss spacings. In general, for farm service buildings, designs to resist snow and wind loads of 30 pounds per square foot are heavy construction; 20 to 25, medium; and 15, light. Consult local building codes or your county agent for the recommended design live load for your area.
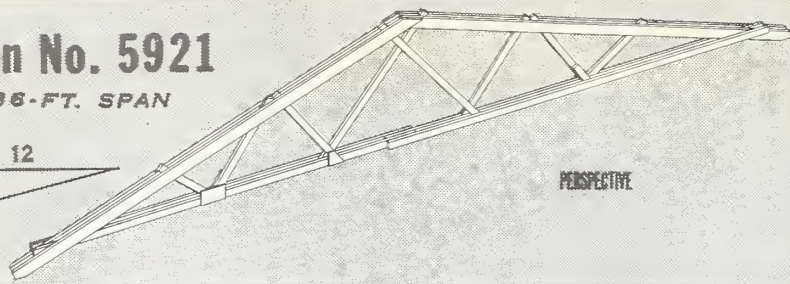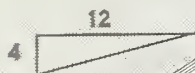
Plan No. 5921

36-FT. SPAN

PERSPECTIVE

WHERE SNOW OR WIND LOADS WILL NOT EXCEEO....	TRUSSES MAY BE SPACED UP TO....	PURLINS	
		MAY BE....	SPACED UP TO....
15 LBS. PER SO. FT.	12'-0" O.C.	2" x 4"	1'-6" O.C.
		2" x 6"	3'-6" ☆
18 LBS.	10'-0"	2" x 4"	1'-8"
		2" x 6"	3'-6"
23 LBS.	8'-0"	2" x 4"	2'-0"
		2" x 6"	3'-8"
31 LBS.	6'-0"	2" x 4"	2'-8"

☆ MAX SPACING FOR CORRUGATEO METAL

THIS TRUSS IS OESIGNEO TO SUPPORT LOAOS UP TO 200 LBS PER FOOT OF SPAN, INCLUDING THE WEIBHT OF PURLINS AND ROOFINB.

ALL LUMBER SHALL BE STRESS GRAOEO TO PROVIOE 1500 PSI FIBER STRESS IN BENOING, AMD 1350 PSI IN COMPRESSIOM.

PURLINS, SEE TABLE. FASTEN WITH COMMER-CIAL FRAMING ANNCHORS

2 1/2" CORRUGATEO METAL ROOFING

TOP CHORO

WEB MEMBERS

GUSSETS

BOTTOM CHORO

BLOCKING, SPACEO TO SUIT PURLINS. FASTEN WITH TWO 10d, EACH SIDE.
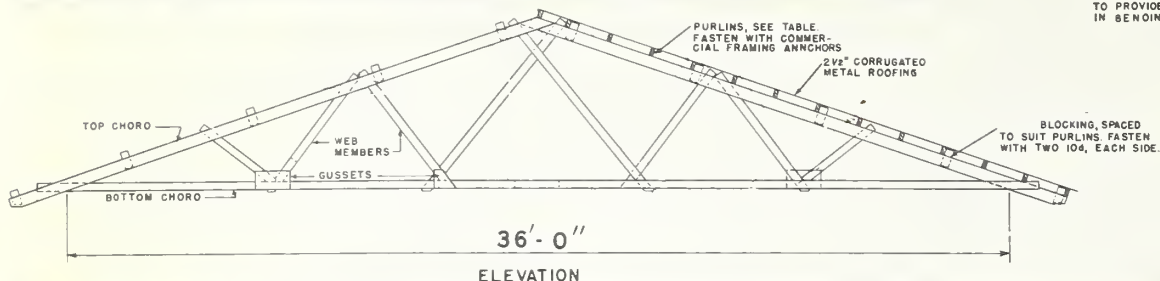
36'- 0"

ELEVATION

Plan No. 5922

24-FT. SPAN

PERSPECTIVE

WHERE SNOW OR WIND LOADS WILL NOT EXCEEO....	TRUSSES MAY BE SPACED UP TO....	PURLINS	
		MAY BE....	SPACEO UP TO...
15 LBS. PER SO.FT.	8'-0" O.C.	2 1/4" ON EDGE	3'-6" O.C.
20 " " "	5'-4" "	2" x 4" FLAT	2'-4" "
25 " " "	4'-4" "	2 1/4" "	2'-8" "
30 " " "	3'-8" "	2 1/4" "	2'-8" "

THIS TRUSS IS OESIGNEO TO SUPPORT LOADS UP TO 120 LBS PER FOOT OF SPAN, INCLUDING THE WEIGHT OF PURLINS ANO ROOFING.

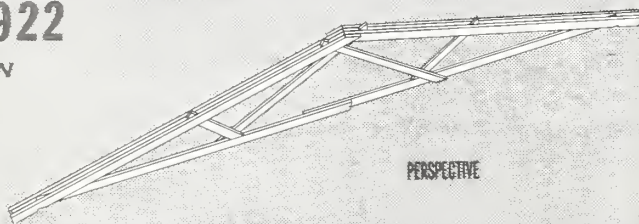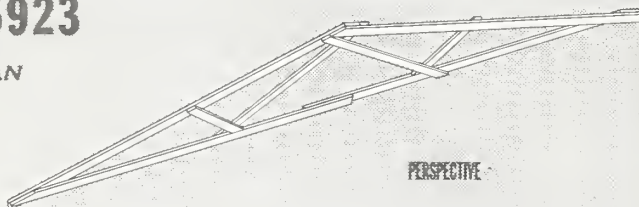ALL LUMBER SHALL BE STRESS GRADED TO PROVIDE 1500 PSI FIBER STRESS IN BENDINB, ANO 1350 PSI IN COM-PRESSION.

DOUBLE TOP CHORO

PURLINS, WITH JOINTS STAGGERED TO ENO ON ALTERNATE TRUSSES. FASTEN WITH COMMERCIAL FRAMING ANCHORS. SEE TABLE.

2 1/2" CORRUGATEO METAL ROOFING

16'-0" TOP CHORO MEMBERS MAY BE SUBSTITUTEO, FOR GREATER OVERHANG

LONG WEB

SHORT WEB

BOTTOM CHORD

24'- 0"

ELEVATION

Plan No. 5923

24-FT. SPAN
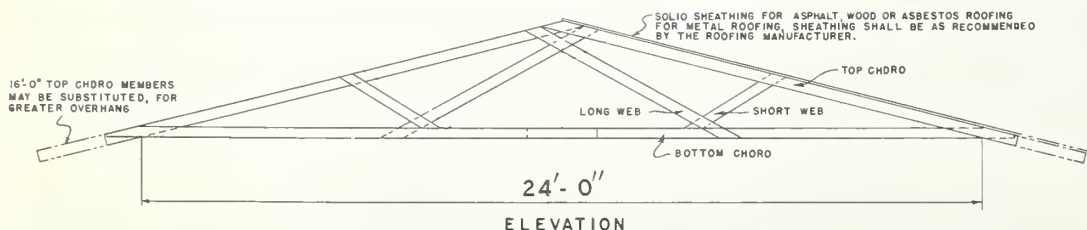

PERSPECTIVE

WHERE BNOW OR WINO LOADS WILL NOT EXCEEO....	TRUSSES MAY BE SPACEO UP TO....	ROOF SHEATHING
15 LBS. PER SO. FT.	4'-0" O.C.	2" x 4" LAIO FLAT SPACEO 3'-6" O.C. FOR 2 1/2 COR. METAL ROOFING ONLY
20 " " " "	2'-8" " "	1" NOMINAL SOLID WOOO SHEATHING FOR ALL ROOFING MATERIALS
25 " " " "	2'-4" " "	
30 " " " "	2'-0" " "	

THIS TRUSS IS OESIGNEO TO SUPPORT LOAOS UP TO 70 LBS. PER FOOT OF SPAN, INCLUOING THE WEIGHT OF THE ROOF.

ALL LUMBER SHALL BE STRESS GRAOEO TO PROVIOE 1500 PSI FIBER STRESS IN BENDING, ANO 1350 PSI IN COMPRESS-ION.

SOLIO SHEATHING FOR ASPHALT, WOOO OR ASBESTOS ROOFING FOR METAL ROOFING, SHEATHING SHALL BE AS RECOMMENOEO BY THE ROOFING MANUFACTURER.

TOP CHORO

16'-0" TOP CHORO MEMBERS MAY BE SUBSTITUTEO, FOR GREATER OVERHANG

LONG WEB

SHORT WEB

BOTTOM CHORO

24'- 0"

ELEVATION

TRUSSES SHOULO BE SECURELY ANCHOREO TO THE SUPPORTING STRUCTURE.